

Labelmaster Dangerous Goods Symposium

Lithium Battery Panel

Chicago, Illinois

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PRBA – The Rechargeable Battery Association

- PRBA Members –
 - Cell/battery manufacturers
 - Manufacturers of electronic equipment, medical devices and automobiles
 - Retailers, testing labs and battery recyclers
 - Airlines, dangerous goods consultants, packaging manufacturers
- Regulatory, legislative and policy issues at state, national and international level
- International transportation forums –
 - UN Sub-Committee of Experts
 - ICAO Dangerous Goods Panel
 - IMO Sub-Committee on Carriage of Cargoes and Containers



Regulatory Tri-Fecta + 1

TRANSPORTATION (DOT/IATA)

ENVIRONMENTAL/RECYCLING (EPA)

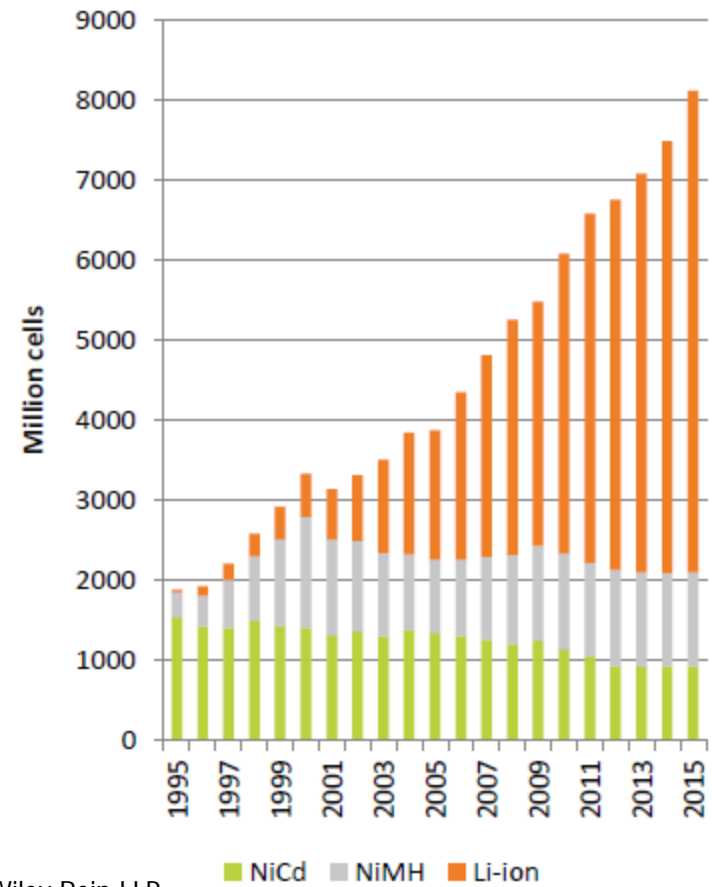
EMPLOYEE SAFETY/SDS (OSHA)

CONSUMER SAFETY/RECALLS (CPSC)

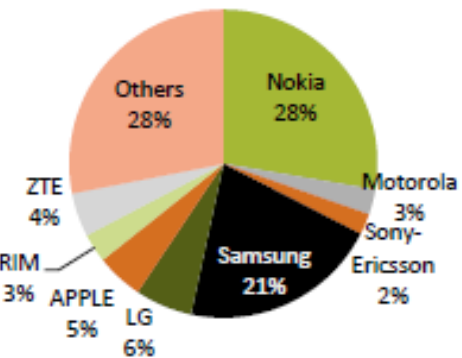


Lithium ion Batteries and Products – The Numbers

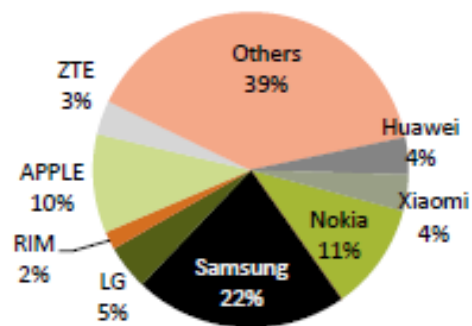
The worldwide rechargeable battery market, Million cells, 1995-2015



2012
1630 M Phones



2014
1900 M Phones



Data courtesy of Avicenne Energy



Recent Lithium Battery Transportation Developments

- I. Amendments to IATA Dangerous Goods Regulations
- II. UN Sub-Committee of Experts
- III. National Transportation Safety Board (NTSB)
recommendations on lithium batteries
- IV. FAA Safety Alert for Operators (SAFO) on lithium batteries
- V. FAA Reauthorization Bill
- VI. SAE G-27 Committee on lithium battery packaging



Recent Lithium Battery Transportation Developments

UN Sub-Committee of Experts

- 19 proposals/informal papers on lithium batteries at June 2016 Sub-Committee meeting
- Two PRBA proposals were adopted
 - ✓ Containerized lithium batteries; new entry in Model Regulations
 - ✓ Clarification on SP exception and Section IB on PI 965 and PI 968 of IATA Dangerous Goods Regulations
- Rechargeable lithium metal batteries???
- Modifications to damaged or defective lithium battery regulations



What's Next on Transportation Front for Lithium Batteries?

- U.S. DOT lithium battery rule
- Non-compliance remains a major concern
- Third-party shipper certification?
- SAE packaging standard



OSHA, Lithium ion Batteries, and Articles

- **Today:** Most lithium ion battery manufacturers consider batteries and products “articles” and exempt from OSHA Haz Comm Standard (HCS)
- **December 2015 OSHA Letter:** Agency does NOT consider lithium ion batteries and products articles
 - Unless subject to another exemption – “consumer products”
- **Implications:**
 - Safety Data Sheet sent to business customers with first shipment
 - Warning language on product labels (could be CPSC labels visible at point of purchase)
 - OSHA HCS training for many employees
- **PRBA 7-page letter to Agency seeking clarification**

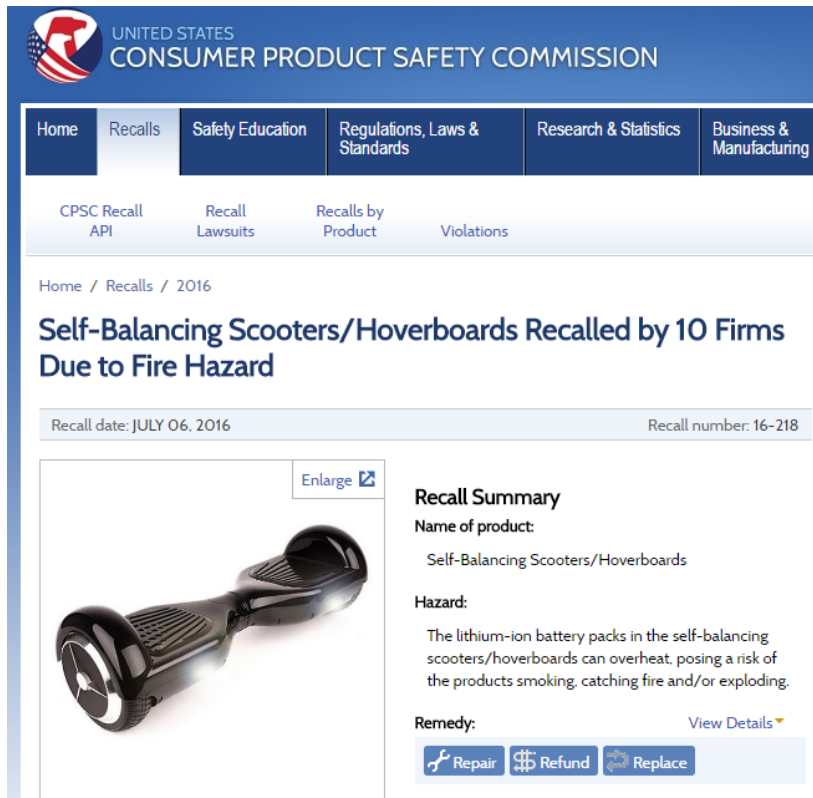


Shipping Waste Lithium ion Batteries

- Large format lithium ion batteries new focus for EPA
- State battery recycling legislation gaining traction
- Are lithium ion batteries classified as hazardous waste?
 - ✓ Pursuant to OECD classification and/or Basel Convention?
 - ✓ In accordance with U.S. EPA RCRA regulations?
- Are you shipping for disposal, recycling, refurbishing, secondary use?



Lithium ion Batteries and CPSC – Hoverboards –



The screenshot shows the CPSC website interface. At the top is the CPSC logo and name. Below is a navigation menu with categories: Home, Recalls, Safety Education, Regulations, Laws & Standards, Research & Statistics, and Business & Manufacturing. Under 'Recalls', there are sub-links for CPSC Recall API, Recall Lawsuits, Recalls by Product, and Violations. The main content area shows a recall notice for 'Self-Balancing Scooters/Hoverboards Recalled by 10 Firms Due to Fire Hazard' with a recall date of July 06, 2016 and recall number 16-218. An image of a hoverboard is shown on the left, and a 'Recall Summary' box on the right contains the following text: 'Name of product: Self-Balancing Scooters/Hoverboards', 'Hazard: The lithium-ion battery packs in the self-balancing scooters/hoverboards can overheat, posing a risk of the products smoking, catching fire and/or exploding.', and 'Remedy: View Details' with buttons for 'Repair', 'Refund', and 'Replace'.

U.S. Consumer Product Safety Commission (CPSC) – Jan. 2016

“I urge consumers to continue to use caution with hoverboards:

- ✓ **Have a working fire extinguisher nearby** while charging or using these boards in and around your home.
- ✓ Charge in an open area away from combustible materials.
- ✓ Gear up before riding, which means putting on a skateboard helmet, elbow and knee pads and wrist guards.
- ✓ And, **do not use a hoverboard on or near a road.”**



Lithium ion Batteries and CPSC – Recalls 2016 –

Company	Product	Chemistry	Units
Lorex	Baby Monitor	Lithium Ion	26,000
Various	Hoverboards	Lithium Ion	501,000
HP	Notebooks	Lithium Ion	48,100
Sony	Notebooks	Lithium Ion	1,721
Brunton	Power Packs	Lithium Ion	1,090
Coleman	Flashlights	Lithium Ion	9,000
Toshiba	Computers	Lithium Ion	101,000
Specialized	Bike Lights	Lithium Ion	110,000
Panasonic	Computers	Lithium Ion	497
Pelican	Flashlight	Lithium Ion	3,800
Rockwood	Power Pack	Lithium Ion	500

